

Article

Embedding Experiential, Practical and Scientific Knowledge on Care for Families with Multiple Problems into the Curriculum of Universities of Applied Sciences

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Abstract: Child and family welfare organizations providing care for families with multiple problems (FMPs) in the Netherlands conclude that future practitioners are often not sufficiently equipped to work with this complex target group. The aim of this study is threefold: (1) to combine experiential, practical and scientific knowledge on care for FMPs, (2) to find out, by using a design-oriented research method, which type of blended learning materials are suitable for the curricula of Universities of Applied Sciences (UAS) and (3) ascertain what facilitating and obstructive factors play a role in the process of implementation. In this study, we adopted a phased approach with four steps: (1) a scoping review, (2) a Delphi study, (3) an inventory of the curricula and (4) a design-oriented research approach. Various stakeholders such as adolescents, parents, teachers, students, practitioners and researchers were involved. The four steps resulted in various products such as informational videos and factsheets, a serious game and an implementation roadmap. We also provide an overview of the facilitating and obstructive factors that played a role in this process. The materials developed in this study contribute towards the training of future professionals in terms of being more reflective about their own way of working with these families.

Keywords: education; families with multiple problems; blended learning; design thinking; serious game



Citation: Evenboer, E.; Welmers-van de Poll, M.; Wienen, A.W. Embedding Experiential, Practical and Scientific Knowledge on Care for Families with Multiple Problems into the Curriculum of Universities of Applied Sciences. *Educ. Sci.* **2023**, *13*, 1163. <https://doi.org/10.3390/educsci13111163>

Academic Editor: Vasiliki Brinia

Received: 12 June 2023

Revised: 7 November 2023

Accepted: 15 November 2023

Published: 20 November 2023



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1. Introduction

Families with multiple problems (FMPs) struggle with a combination of socio-economic and psychosocial problems over a longer period [1]. Various factors play a role in these often long-term and complex problems of FMPs, including contextual factors, family functioning, parental factors, child factors, social networks and care providers [2]. These problems are often intergenerational and transferred from parents to their children, meaning that the care use of these families is rather high. For practitioners in the field of child and family welfare, it is challenging to provide care for these families that meet their needs and has long-term effects [3]. Practitioners providing care to FMPs often fail to motivate and engage families [4] due to the intertwined problems and complexity of their situation.

Child and family welfare organizations providing care and support for FMPs in the Netherlands also conclude that future practitioners are often not sufficiently equipped to work with this complex target group when they enter the labor market. They notice a gap between the content of the education programs and the competences of future professionals and the organizational demands on their professionals working with FMPs. The Universities of Applied Sciences (UAS) in the Netherlands recognize this problem and indicate that it is difficult to find suitable forms of education in which recent knowledge on working with FMPs can be easily embedded and updated. The curricula of the UAS are set for a number of years, thus making it difficult to make changes in the shorter term. More blended learning materials and more flexible educational arrangements are needed

to keep teaching materials up to date and ensure that they meet the needs of the future professionals and organizations working with FMPs.

There is experiential, practical and scientific knowledge available about care for FMPs [5]. However, this knowledge does not automatically find its way into the curricula of UAS to train future professionals. Therefore, it is necessary to find a way to translate these three types of knowledge into various types of learning materials. Developing several forms of blended learning can be a promising way to more easily embed these types of knowledge into educational programs. Previous research has shown that blended learning has a positive effect on students' learning performance [6,7]. In addition, blended learning can encourage students to study the subject matter in a more active way, which improves the quality of education. In addition, it contributes to supporting self-management and adapting to the (more specific) needs of (future) practitioners.

In this research (i.e., when we mention the word “research” it could be seen as synonym for “project”), we adopt a phased approach with four steps to translate available experiential, practical and scientific knowledge about care and support for FMPs into various forms of blended learning. These four steps are (1) a scoping review, (2) a Delphi study, (3) an inventory of the curricula and (4) a design-oriented research approach. Since this is a relatively new way of translating available knowledge into various blended learning materials, we will briefly explain our working method in this study to inspire others to work in the same way with translating current knowledge on a specific theme into forms of blended learning to be used in the UAS curricula. Throughout the research process, we will examine which facilitating and obstructing factors play a role in translating knowledge into one or more forms of blended learning and in implementing these forms of blended learning into the curricula.

The aim of this research is threefold: (1) to combine experiential, practical and scientific knowledge on care for FMPs, (2) to find out, by using a design-oriented research method, which type of blended learning materials are suitable for the curricula of the UAS and (3) to ascertain what type of facilitating and obstructive factors play a role in the process of implementing learning materials.

2. Methods

We conducted this research between April 2019 and March 2021 in collaboration with a number of organizations:

- Four UAS in the Netherlands (Windesheim, Hogeschool Arnhem Nijmegen, NHL-Stenden and Fontys).
- Stichting Alexander, which is an organization specialized in youth participation.
- The Netherlands Youth Institute, which is a national knowledge center that collects, interprets and shares current knowledge about growing up.
- University Medical Center of Groningen (department of Health Sciences), which has carried out a lot of research on care and support for FMPs.

We used four steps in order to answer the aims of this research (Figure 1).

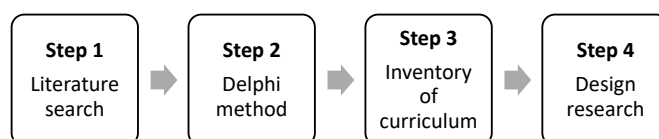


Figure 1. Process of translation of available knowledge into one or more forms of blended learning.

2.1. Step 1—Literature Search

The first step comprises bundling (inter)national scientific, practical and experiential knowledge about the professional skills and support required for FMPs through a scoping review. The scoping review took as its starting point the knowledge from the Databank Effective Youth Interventions (DEYI), the “what works” files on FMPs from the Netherlands Youth Institute [8], the FMP guidelines [1], the literature review study carried out by the

Severe Parenting Problems and Multi-Problem Families consortium [9], the report on the effectiveness of support to FMPs [10] and the outcomes of other ZonMw projects on this theme. In addition, additional gray and scientific national and international literature was searched for in the period from 2014 to 2019. Search terms used (in various combinations) were, “multi-problem families/families with multiple and complex problems”, “assistance/care/treatment” and “interventions/interventions”. The national and international scientific literature was searched through PsycInfo, SocIndex, Medline, Eric, Picarta and Web of Science. Gray literature was searched via the database GLIN (Grey Literature in the Netherlands), Google Scholar and through websites of knowledge institutions like the Netherlands Youth Institute and Praktikon. We used a checklist to obtain information on the content of these articles and the results were categorized into five categories, namely (1) definitions and characteristics of FMPs, (2) common factors and specific effective elements of support for FMPs, (3) interventions for FMPs, (4) characteristics of professionals working with FMPs and (5) bottlenecks experienced in the care provision to FMPs.

2.2. Step 2—Delphi Method

In the second step, it was analyzed which knowledge from step 1 matched the needs of organizations working with FMPs in daily practice and the needs of UAS, more specifically of social work and pedagogy. A Delphi study was carried out for this purpose, in which experienced experts (parents and adolescents), lecturers, teachers, students, researchers and practitioners shared their knowledge and insights with each other. The Delphi method comprised several rounds in which the answers of the participating experts were analyzed after each round and reported back to them [11]. We organized a separate round for the experienced experts (parents and adolescents) to adjust the language to this target group. In the various rounds, the two groups of the Delphi study responded to the outcomes of the other, thus deepening the insights and reactions gained.

Two Delphi rounds (with two groups per round) were held, in which an overview with the most up-to-date knowledge was presented to the groups in the first round via 33 propositions and four open questions. Consent was defined as at least two-thirds of the respondents ($\geq 67\%$) choosing the choice categories of ‘agree’ or ‘completely agree’ with a statement. In the meeting with the experienced experts, insight was gained into the characteristics of good and bad care providers by means of a working method. In addition, for a number of propositions, they indicated the extent to which they agreed or disagreed and why.

In the second round, respondents provided feedback on the results of all groups from the first round. Based on the results of the first round, nine additional propositions and four open questions were included in the second round, with the aim of further sharpening and deepening the results. In addition, in the second round, another meeting was organized for experienced parents and adolescents, in which the results from the first round of all groups were presented, after which a number of themes were further elaborated. The outcomes of this step were used in step 4, the design-oriented research phase.

2.3. Step 3—Inventory of the Curriculum of the UAS

The third step was to map out what the four UAS already offered in their curricula of social work and pedagogy aimed at care and support for FMPs. Thereby, each UAS developed an inventory of the types of education offered on FMPs. The aim of the inventory was to prevent developing materials that are already incorporated in the existing curricula and ensure that it complements the current range of educational programs and curricula. During this research, we jointly established that more digital educational resources and more flexible educational arrangements were needed to keep teaching materials up to date and better meet the needs of future professionals and organizations providing care to FMPs in daily practice. Blended learning is a mix of different ways of learning, from face-to-face to e-learning, and previous research has shown that blended learning has a positive effect on students’ learning performance [6,7].

2.4. Step 4—Design-Oriented Research

To subsequently determine which forms of blended learning are suitable for transferring the desired knowledge, a design-oriented study was carried out in the fourth step [12,13]. In co-creation with parents, adolescents, teachers, students, practitioners and researchers, we examined the scope for new forms of blended learning, where the needs are and how these forms of education could be fulfilled.

Concrete designs for one or more forms of blended learning were elaborated based on the method of “design thinking”, a specific method within design-oriented research. Design thinking is a creative process for generating new ideas and concepts. In this phase, it is not about the quality of the ideas, but rather the quantity, whereby multiple ideas are generated.

3. Results

The four steps as described in the Section 2 resulted in various results per step. We briefly describe the outcomes of each step below.

3.1. Results of the Literature Search

The literature search resulted in 37 articles and reports that were included in the scoping review. The list of the included articles can be requested from the authors. The literature collected was categorized into five categories, namely, (1) definitions and characteristics of FMPs, (2) common factors and specific effective elements of support for FMPs, (3) interventions for FMPs, (4) characteristics of professionals working with FMPs and (5) bottlenecks experienced in the care provision to FMPs.

3.1.1. Definitions and Characteristics

Concerning the definition of FMPs, we established the following definition: “A family with multiple and complex problems (FMP) consists of at least one parent and one child struggling for a long time with a combination of socio-economic, psychosocial and parenting problems”. The characteristics of these families were divided into child factors (i.e., psychosocial or emotional problems), parent factors (i.e., mild intellectual disability or emotional/psychosocial problems), parenting factors (i.e., pedagogical impotence or insecure bonding), family functioning (relational problems and conflicts), contextual factors (i.e., financial problems or neighborhood), social network (i.e., the lack or presence of a network) and factors in the context of providing care (i.e., lack of suitable support for FMPs).

3.1.2. Common Factors and Specific Elements of Support

What common factors play a role regardless of the type of help offered? What qualities should a (reflective) professional possess and what should he/she be able to do? And in addition, which specifically effective elements are important in providing assistance to GMCP? Below is an overview of some of the common factors and specific elements mentioned in the literature.

Common factors: a good relationship between the FMP and the professional, complexity and multiple alliances with and within the family, motivation of the FMP, caseload, supervision of professionals, interprofessional collaboration between professionals and organizations.

Specific elements: long-term support with varying intensity, support that is aimed at all family members (not only parents), treatment fidelity and flexibility, support that is aimed at various domains/factors (see factors in the paragraph above) at the same time, involving the social network and after-care support.

3.1.3. Interventions for FMPs

In the Netherlands, several interventions for FMPs are available. In this study, we made a distinction between interventions that were part of the Databank Effective Youth

Interventions (DEYI) and interventions that were not part of the DEYI. Interventions that are part of the DEYI are at least theoretically well founded, and there is also research on the effectiveness of these interventions available [14].

There were 10 interventions that were part of the DEYI, and 21 interventions were not part of the DEYI at the time of carrying out the study. By far the most of the 10 interventions within the DEYI were theoretically well founded, and a much smaller part of the interventions had empirical studies supporting their effectiveness. A number of interventions had small indications for effectiveness (effect sizes $p \geq 0.5$), and only two interventions in the DEYI were labeled as “effective according to strong indications” (Multisystemic Therapy, MST and Multidimensional Family Therapy, MDFT).

3.1.4. Characteristics of Professionals Working with FMPs

We also reviewed the articles on the important characteristics of professionals working with FMPs. A number of characteristics that were mentioned were transparency, sincere commitment with the family, trust, respect, good social and communicative skills, creativity and flexibility, stress resistance, being accessible and approachable and being able to maintain good alliances with all family members.

3.1.5. Bottlenecks

While scoring the included articles regarding professional skills and support to FMPs, bottlenecks in the assistance process also regularly emerged. Therefore, even though this topic was not described in the application/plan of action, we decided to include these bottlenecks, especially as we believe that part of the key to optimizing the assistance to FMPs lies in addressing these bottlenecks. Bottlenecks that were often mentioned were long waiting lists, budgetary partitions, poor information exchange between organizations and professionals and interventions that are offered for a defined period, when sometimes long-term attention is needed.

The overview of the literature was the starting point for the Delphi methodology, with which we wanted to distill the most important knowledge to be translated into forms of blended learning.

3.2. Results of the Delphi Method

The questionnaire of the first Delphi round was based on the results of the literature review. The questionnaire consisted of 33 propositions and 4 open questions. Each statement could be scored on a Likert five-point scale ranging from completely disagree to completely agree. For each statement, there was an opportunity to give a brief explanation. In the first Delphi round, over 150 professionals, college teachers, students and researchers responded to a questionnaire with statements and open questions, and experienced parents and young people responded to a number of statements and questions in group meetings. In the second Delphi round, the results from the first round were linked back to all groups involved with nine additional statements and four open-ended questions, aiming to further sharpen or deepen the results from the first round. In this second round, 83 professionals, teachers, students and researchers and parents and young people responded to the questionnaire.

All groups agreed on the importance of a good cooperative relationship between counsellor(s) and family, in which joint decision making is the starting point. Furthermore, all groups felt that motivating family members and encouraging mutual cooperation between family members on common goals is an important task of the counsellor(s). Furthermore, all groups saw the importance of a child-centered component in counselling, and an exception to the principle of making joint decisions with the family when the safety of children is in danger. A final similarity between all groups is that they consider a flexible approach that fits the specific needs and characteristics of the family very important. When asked about how to improve education on helping FMPs and what themes are important in this, the main thing that emerged was that a good

connection between theory and practice is essential. It must be possible to practice skills in an authentic professional context that does justice to the complexity and diversity of the target group.

The results of the Delphi showed the main knowledge and skills that should be central according to respondents (see Table 1). The results provide a clear framework for thinking about the development of blended learning materials for the UAS.

Table 1. Main knowledge and skills that should be central according to respondents.

• Conversation skills (including in discussing safety concerns)
• Working on a good working relationship with attention to multiple alliances
• System-oriented work
• Learning to analyze, substantiate and act integrally and transversally
• Skills in cooperating with other institutions, in particular the direction and knowledge of the social map
• Culture-sensitive working
• Dealing with resistance and aggression
• Reflective practice
• Knowledge of political, social and legal factors and skills to relate to them
• Identifying and dealing with specific problems such as mild intellectual disabilities, addiction, fighting divorce and psychological problems

3.3. Results of the Inventory of the UAS Curriculum

The aim of the inventory was to prevent developing materials that are already incorporated in the existing curricula and ensure that it complements the current range of educational programs and curricula. The result of this step was an overview, for each UAS, of the curriculum.

3.4. Results of the Design-Oriented Research Approach

As described in the methods, we used a design-oriented research approach to develop new forms of blended learning. The ideas generated during the design thinking phase were presented to the students, teachers, professionals and researchers involved in the study. Thereby, it was important that the blended materials were flexible learning materials that enabled students to be more reflective about their own way of working with FMPs in the future. This resulted in various blended learning materials, such as a serious game, factsheets, informational videos, assignments and an implementation roadmap. Each of these results of the design-oriented research-approach will be briefly explained below.

3.4.1. Serious Game (SG)

In a very short period, five groups of students from the Master of Health Innovation (NHL-Stenden University of Applied Sciences), together with students of the Master of Design Driven Innovation and Serious Gaming, generated ideas for forms of blended learning based on the results of steps 1 and 2. There were several options, such as one where the game was shaped by communicating with each other via e-mail and receiving assignments based on a student's response to that e-mail. Another option was more a real game mode, in which choices made during the game directly affected the course of the game. By using a decision matrix, we choose the most promising idea concerning creating a safe learning environment for students to learn new skills and reflect on their own way of working. The matrix was filled in by the various groups involved in the project. The result was that the development of a serious game was most promising. A study by Gentry and others [15] showed that the use of games can influence satisfaction, motivation and cognition in learning skills.

There are various types of serious games, for example games for health, games for safety and security and games for didactics [6]. For our purposes, the concept of a serious game for didactics (SG) was most suitable. By imitating (recontextualizing) authentic practical situations and confrontations in a game setting, (future) professionals can learn to deal with complex situations in an innovative way and reflect on their own actions.

The storyline that forms the basis of the SG was developed in collaboration with professionals, researchers, teachers and social work students of the UAS and translated into the SG by the students and researchers of the SG master's program.

The SG contains an online (digital, playing the game on your laptop or telephone) and a face-to-face (interview, supervision) part. The testing of the SGI took place on the four UAS with lecturers, students and researchers. In addition, parents and young adults also tested the SGI in order to verify whether the situations were matching with their everyday life and the care and support they received. One or more concepts were tested and adjusted through an iterative process. This cycle repeated itself a number of times until those involved were satisfied with the result.

During the second and fourth steps, we gathered information on what knowledge is important to implement within the blended learning materials, in this case the SGI. We divided these elements into the most important knowledge and professional skills to be learned by using the SGI and the scenarios underlying the SGI. The most important knowledge and skills that should be central according to the respondents are mentioned in Table 2 below.

Table 2. Main knowledge and skills that should be central in the SGI according to respondents.

Knowledge:
<ul style="list-style-type: none"> • Conversational skills (e.g., in making concerns about safety a subject for discussion); • A strong working relationship with FMP members, with attention to multiple alliances; • System-oriented working; • Integral and transcending learning to analyze, substantiate and act; • Skills in the field of cooperation with other institutions; • Culture-sensitive working; • Dealing with resistance and aggression; • Acting reflectively; • Knowledge about political, social and legal factors; • Identifying and dealing with specific problems such as intellectual disabilities, addiction, psychological problems and divorce.
Skills for future practitioners:
<ul style="list-style-type: none"> • Timing (of actions); • Learning to engage family members and position if necessary; • (Learning to) take control; • Complexity and multiple alliances with and within the family; • Reflection on one's own practice.

The scenarios underlying the SG were working on safety within the family and dealing with resistance within FMP families. These scenarios were based on real-life (anonymous) cases of FMPs in daily practice, which we received from the teachers who participated in our study. The SG is a game which contains multiple choice answers and whereby the answer you give to the question determines the continuation through the game.

The SG was based on the most important knowledge and can be divided into three different levels, which can be played separately (for example level A in year 1, level B in year 2, etc.) or subsequently. All the elements mentioned above are part of one of these levels. The levels are:

- A. Getting to know each other, multiple alliances and positioning and engaging;
- B. Multidisciplinary and integrated working, prioritization (timing), and dealing with conflicting interests;
- C. Systemic conversation, dealing with conflicting interests.

After playing the SG, students can download their routing through the game, so that they can discuss with other students (feedback) and their teacher (supervision) why they made certain choices during the game. There is no right or wrong; rather, it is mainly about the reflection on one's choices and the discussion about that with others. In addition to the SG, we also developed educational material (reflective to support the conversation about the game).

3.4.2. Factsheets, Informational Videos and Assignments

In addition to the SG, we also developed other blended learning materials, such as factsheets, informational videos, assignments and an implementation roadmap. Based on the outcomes of various steps, we elaborated various factsheets; for example, regarding the scoping review results, regarding the outcomes of the Delphi study, the process of translation into blended learning materials and a factsheet about facilitating and obstructive factors that played a role in this process. These factsheets are interactive and could be used by students, as well as teachers or researchers, in addition to the SG. Furthermore, we developed a number of informational videos containing information about providing care for FMPs and specific sub-themes such as working on (multiple) alliances with and within FMPs. In addition to the factsheets and informational videos, we developed several assignments that could be used by teachers during the lessons in the curriculum. These assignments are also related to the various levels of the SG and can help students and teachers through discussion of the results of playing the game. All of these materials are placed online and are interactive, so that they can be easily used by the various UAS.

3.4.3. Implementation Roadmap

We developed the implementation roadmap as a guideline for implementing blended learning materials within the various UAS. Roughly speaking, the implementation roadmap contains information on:

- No one-size-fits-all instruction: the roadmap offers options and option tools to use the appropriate working methods to increase the chance of implementation success;
- An explanation of existing theories/models about implementation, especially about determinants and the phasing of implementation processes;
- Suggestions of activities and methods that the teachers involved can use that contribute to the sustainable implementation of the digital learning resources;
- Some possible working methods that can be used, like a stakeholder analysis, student journey map, desktop walkthrough or a creative session in which the SG is being experienced.

As described above, the implementation roadmap contains some guidelines for teachers to use the digital learning resources and some methods on how to implement the materials within their UAS.

This way of translating experiential, practical and scientific knowledge into various forms of blended learning is relatively new within the field of social studies within the UAS. Therefore, we also gathered information during this project on the facilitating and obstructive factors within this process. These factors can be of interest for future projects related to translating knowledge.

3.4.4. Facilitating and Obstructive Factors

Facilitating factors in the process of combining scientific, practical and experiential knowledge on care for FMPs and developing blended learning materials that could be easily added to the existing curricula of UAS were as follows:

- Collaboration between the UAS (enthusiasm, engagement, sense of urgency);
- Student commitment from various courses of various UAS, with interdisciplinary collaboration between students;
- a new form of education, as it is new for everyone and, therefore, the starting point is the same for everyone (starting from scratch);

- The knowledge that was already present, with substantial knowledge from research, education, practice (professionals), parents and young people (the target group, experts by experience);
- Coronavirus, given that education had to take place online, increasing support for online forms of education such as an SG;
- Learning from each other's working method(s) to implement the blended learning materials, for which mutual exchange was important and offered the project group members from the four UAS many new insights.

Obstructive factors during this project were as follows:

- It is a matter of patience (time) to distribute the blended learning materials to the UAS;
- It was quite difficult to come up with qualitative good scenarios. During the project, we had to make choices in terms of the content of the scenarios underlying the SG, during which it took a relatively long time to build these scenarios based upon real-time cases;
- The differences between the UAS (context), as "how it works" and who is responsible for using the materials are quite different for each of the UAS;
- Sometimes short-term action and adjustments are required, which is not always in line with the educational cycles, which are more focused on the long term and are relatively stiff;
- Processes are sometimes difficult to pin down in advance and therefore less easy to coordinate in favor of implementing new blended learning materials;
- Cold feet when starting the project. Given that all the UAS are so different, it was difficult to determine how to develop something that functions within each of these four contexts;
- As a researcher, it is sometimes difficult, given that you are involved in the project but do not teach yourself. This means that you have relatively little influence on the process of implementation with the curricula and are mainly facilitating.

4. Discussion

The aim of this research was threefold: (1) to combine experiential, practical and scientific knowledge on care for FMPs, (2) to find out, by using a design-oriented research method, which type of blended learning materials are suitable for the curricula of the UAS and (3) ascertain what type of facilitating and obstructive factors play a role in the process of implementing learning materials. Concerning the first aim of the research, we can conclude that it holds added value to combine experiential, practical and scientific knowledge on care for FMPs as a base for developing blended learning materials. It is especially important to implement the perspectives of FMPs more into the learning materials to better meet their needs and strengthen care [3]. The Delphi method can be considered an appropriate method to filter out the most important knowledge from a multitude of information and knowledge. However, carrying out a literature review and the Delphi method is a relatively labor-intensive process that cannot be achieved in a very short period of time. That is an important factor to take into account when translating knowledge into new forms of learning materials or when adding the new knowledge to existing learning materials.

Concerning the second aim of the research, we can conclude that blended learning materials are a useful way to embed relevant experiential, practical and scientific knowledge into the curriculum of UAS, where it stimulates the learning performance of students (Kuipers, 2019) [6]. Furthermore, developing various blended learning materials is important in order to increase the likelihood that these educational materials will be used. Providing a diversity of materials that can be delivered in "bite-sized components" that fit into the existing range of materials is therefore important. Teachers at the UAS do not have to implement "whole packages", but rather, they can also use specific parts of all the materials (e.g., only the SGI or informational videos). Ensuring that the threshold is as low as possible for teachers increases the chance of them using the blended learning materials. It can help if a teacher who is already familiar with the blended learning materials helps

another teacher who will use the materials for the first time. These are the so-called “early adaptors”, who are important for convincing the majority of the teachers to use these new materials [16,17].

However, the translation of the knowledge into a serious game is a process that takes time, and it is also quite expensive. It takes time to build the structure and routing of the game and also to translate a realistic case concerning an FMP family receiving care into a storyline that fits into the game. Furthermore, we tested the game in an iterative process involving different target groups. This whole process took about one year from building the game structure until the last iterative session. Therefore, it is not a way or method that can be easily deployed by everyone, because it costs time and money. The development of the informational videos, the factsheets and the implementation roadmap were less labor-intensive and easier to develop. Concerning the third aim of the research, we can conclude that there were a number of facilitating and obstructive factors that played a role in the process of implementing the learning materials into the curricula of the UAS. It is a matter of patience (time) to distribute the blended learning materials in the UAS and getting to know how it works within the four UAS, as well as who is responsible for using the materials. In addition, as a researcher, it is difficult given that you are involved in the process but do not have a direct influence on the implementation process with the educational curricula. This also relates to the implementation strategy mentioned above and is important to keep in mind. An important facilitating factor during this study was that the project was mainly carried out during COVID-19, making the importance of blended learning materials even more clear. In addition, the fact that we developed “bite-sized components” that fit into the existing range of materials was also a facilitating factor. Furthermore, we can conclude that it is important to involve an educational expert during the development phase in order to monitor whether the blended learning materials are developed in the right educational way.

4.1. Limitations and Strengths

A first limitation of our research was that we did not involve various people from the educational sector early on in the process. Teachers were present from the start, but educationalists and program managers were not. During this study, we mainly involved them in the process of coming up with ideas on the parts of the curricula in which the materials could be used, but not so much in terms of making use of their vision on education and the design of educational materials. Another limitation of the research was that we did not have a clear overview in mind at the beginning of the project of where the educational materials could be implemented. We developed the inventory of the curricula during the project during the third step, which might have influenced the speed with which the blended learning materials were used within the curriculum. One strength of this research was that we used a phased approach with various steps, in which stakeholders from the experiential, practical and scientific spheres were represented. Another strength of this research was using the design-oriented approach of design thinking, with a creative process for generating new ideas and concepts. A third strength of this research was providing a diversity of materials that were delivered in “bite-sized components”, so that teachers of the UAS do not have to implement “whole packages” but rather can also use specific parts of the materials.

4.2. Implications

Based on the results of this research, we have derived a number of implications for future research projects on translating various types of knowledge into blended learning materials for educational purposes. First, it is useful to make use of (future) moments in which educational innovation takes place, which can increase the chance that new blended learning materials are more easily and quickly embedded within the curricula. These curricula are revised approximately every five years, which emphasizes the importance of timing.

Second, based on the results of our research, we advise involving an educational expert from the start of the project to make use of their vision of education and the design of educational materials. A third implication for future research is that already during the research process, we (researchers) have to pay more attention to how the knowledge obtained could be more easily translated into educational programs. This relates to the impact of our research for education and practice to better meet the needs of FMPs. Developing a serious game does meet the needs of creating a safe and realistic learning environment, but also, it is relatively expensive and takes some time to develop.

5. Conclusions

In conclusion, we see that it is a valuable process to embed experiential, practical and scientific knowledge within the curricula of the UAS. At the same time, we see that it is a time-consuming process which should be taken into account beforehand. While conducting research, we should already bear in mind that the knowledge we produce is also relatively easy to translate into bite-sized components for educational programs of the UAS.

Author Contributions: A.W.W.: writing—review and editing; M.W.-v.d.P.: writing—review and editing; E.E.: original draft preparation, review and editing. All authors have read and agreed to the published version of the manuscript.

Funding: This study received funding from the Netherlands Organization for Health Research and Development (ZonMw): 729211002.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data (for example an overview of the studies included in the review) can be requested via the first author of the article.

Conflicts of Interest: The authors declare no conflict of interest.

References

- van der Steege, M.; de Veld en Mariska Zoon, M. Guideline Families with Multiple and Complex Problems for Youth Care and Youth Protection (Revised Version of Guidelines of 2017). 2020. Available online: https://richtlijnenjeugdhulp.nl/wp-content/uploads/2020/06/Richtlijn-Gezinnen-met-meervoudige-en-complexe-problemen_V4-2020-22-DEF.pdf (accessed on 9 September 2018).
- Bodden, D.H.M.; Dekovic, M. Multiproblem families unraveled. *J. Orthop.* **2010**, *49*, 259–271. (In Dutch)
- Visscher, L. Elements that Determine the Effectiveness of Interventions for Families with Multiple Problems: Towards More Tailored Care. Ph.D. Thesis, University of Groningen, Groningen, The Netherlands, 2022. [CrossRef]
- Schout, G.; De Jong, G.; Zeelen, J. Beyond care avoidance and care paralysis: Theorizing public mental health care. *Sociology* **2011**, *45*, 665–681. [CrossRef]
- Visscher, L.; Jansen, D.E.M.C.; Scholte, R.H.J.; van Yperen, T.A.; Evenboer, K.E.; Reijneveld, S.A. Elements of care that matter: Perspectives of families with multiple problems. *Child. Youth Serv. Rev.* **2022**, *138*, 106495. [CrossRef]
- Kuipers, D. Design for Transfer: Figural Transfer through Metaphorical Recontextualization in Games for Health. Ph.D. Thesis, University of Groningen (Rijksuniversiteit Groningen), Groningen, The Netherlands, 2019. [CrossRef]
- Spanjers, I.; Konings, K.D.; Leppink, J.; van Merriënboer, J. Blended Learning: Hype or Enrichment of Education? 2014. Available online: <https://onderzoek.kennisnet.nl/app/uploads/2016/12/KennisnetverslagBlendedLeren.pdf> (accessed on 6 September 2018).
- Netherlands Youth Institute. What Works for Families with Multiple and Complex Problems. 2020. Available online: <https://www.nji.nl/sites/default/files/2021-06/Wat-werkt-in-hulp-aan-gezinnen-met-meervoudige-en-complexe-problemen.pdf> (accessed on 6 September 2018).
- Vermaat, M.; Evenboer, K.E.; Veerman, J.W.; Scholte, R.H.J.; Zoon, M.; Dickscheit-Knot, J.; van Yperen, T.; Jansen, D.E.M.C.; Reijneveld, S.A. *Research Report Consortium Severe Parenting Problems and Multiproblem Families—Phase 1*; University Medical Center of Groningen: Groningen, The Netherlands, 2015.
- Holwerda, A.; Reijneveld, S.A.; Jansen, D.E.M.C. *The Effectiveness of Care for Multiproblem Families: An Overview*; GAK Instituut: Groningen, The Netherlands, 2014.
- Migchelbrink, F. *Practice-Based Research in Care and Welfare*; SWP: Amsterdam, The Netherlands, 2000.
- Van Aken, J.; Andriessen, D. *Handbook Design Oriented Scientific Research*; Boom: The Hague, The Netherlands, 2011.

13. van 't Veer, J.; Wouters, E.; Veeger, M.; van der Lugt, R. *Ontwerpen voor zorg en Welzijn*; Uitgeverij Coutinho BV: Bussum, The Netherlands, 2020; ISBN 9789046906910.
14. Netherlands Youth Institute. Databank Effective Youth Interventions. 2023. Available online: <https://www.nji.nl/interventies/erkenningsprocedure> (accessed on 26 May 2023). (In Dutch).
15. Gentry, S.; Ehrstrom, B.L.; Gauthier, A.; Alvarez, J.; Wortley, D.; van Rijswijk, J.; Car, J.; Lilienthal, A.; Car, L.T.; Nikolaou, C.K.; et al. Serious Gaming and Gamification interventions for health professional education. *Cochrane Database Syst. Rev.* **2018**, *2018*, CD012209. [[CrossRef](#)]
16. Stals, K.; Yperen, T.; van Reith, Y.; Stams, G.J. *Effective and Sustainable Implementation within Youth Care. A Literature Report on Hindering and Facilitating Factors on the Implementation of Interventions in Youth Care*; NJI/University of Utrecht: Utrecht, The Netherlands, 2008.
17. Stals, K. *De Cirkel Is Rond. Onderzoek Naar Succesvolle Implementatie van Interventies in de Jeugdzorg*. Ph.D. Thesis, Universiteit van Utrecht, Utrecht, The Netherlands, 2012.

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